COPPER TO ALUMINUM INTERLAYER INTERCONNECT USING STUD AND VIA LINER

ABSTRACT OF THE DISCLOSURE

Tungsten studs of a size comparable to vias are provided to integrate and interface between copper and aluminum metallization layers in an integrated circuit and/or package therefor by lining a via opening, preferably with layers of tantalum nitride and PVD tungsten as a barrier against the corrosive effects of tungsten fluoride on copper. The reduced size of the tungsten studs relative to known interface structures allows wiring and connection pads to be formed in a single aluminum layer, improving performance and reducing process time and cost.